Investing in the Future: Food and Digital Printing Applications for Superior Growth
Recently, I was lucky enough to attend the launch of the Tetra Pak E3 electron beam (ebeam) mixing machine platform at Fispal Tecnologia in São Paulo, Brazil.
Market introduction according to plan

Great feedback from the market
Customer feedback

«This is the best machine from Tetra Pak we have ever seen! Arigatou gosaimaz!»

Meiji (Japan)
«...this is a breakthrough innovation! Tetra Pak and the project can be proud of it!»

Juhayna (Egypt)
«One of the best Tetra Pak packaging projects ever»

CoRo (Denmark)
We tested over 20 products – it works!

Next steps:
A) Field test in 2017
B) Industrialization and market acceptance
A) ebeam Lamps = blue
B) ebeam System = grey
C) Bühler Inlet and Outlet = green
Bühler Networking Days

Learnings:
Today’s processes can’t feed 9 Billion people
Inactivation of bacteria needed
Breakout Session

Team Food

Vincent Ducry
Project Manager
ebeam

Nicolas Meneses
Expert Food & Feed Safety
Bühler
Global Trends

Food Safety
Global Packaging: The Situation

Market Size
US$ 400b

Annual Growth
Digital Printing
5 – 8 %

Main Packaging Material: Plastic Film
37%

Packaging for Food and Beverages:
69%

Source: EY analysis, marketsandmarkets.com and smitherspira.com
ebeam for everyone

Printing Technologies

Analog
- Offset
- Flexo

Digital
- Electrophotography
- Inkjet
The Drivers

**HP Indigo**
can now enter into the food packaging market

**Digital Inkjet**
for individualization
Why is this a Revolution?

Digital Image

- Computer-to-film
  - Film exposure
  - Plate manufacturing
  - Machine set-up
  - Printing

- Computer-to-plate
  - Plate manufacturing
  - Machine set-up
  - Printing

- Computer-to-press
  - Plate creation
  - Printing

- Computer-to-print
  - Printing

Source: Bobst
The Benefits of ebeam

- High Performance
- Constant in Time
- Energy Efficiency
- No Heat
- Colour Blind
- Better Adhesion
- No Photoinitiators
- No Monomers left
- No Odour
drupa 2016

A. Launch of the smallest drying device: EID (= ebeam inkjet dryer)
B. Introduce concept to the industry
C. Find strategic partners
E-beam technology

With the world's digital print is making into packaging food safety is becoming a crucial consideration, as can be seen with vendors opting for water-based formulations over UV for many inkjet machines targeted at packaging. There is an alternative, E-beam curing, as shown at drupa by ebeam Technologies, with a compact and lower cost e-beam curing system, suitable for mounting on narrow web (up to 400mm) machines. As a technology for curatives, a E-beam is not new, and is used in flexo and gravure. However it has previously been too expensive for inkjet applications. This is due to the higher cost and complexity of the curing systems, even though the inks can be 20% cheaper than similar UV inks. With a potential price for a 40 cm system of €130000, all these times the price of a UV system - E-beam cannot be called cheap. However, the cost in use is less with lower energy costs and smaller, less expensive rinses. The big benefits though are the potential of food contact safe output. It has been reported that E-beam could be a replacement for all UV curings, including flexo print. The high hardware price and the inability to either together modules to increase curing width make that impractical.

It might seem strange to focus on a product that does not have mass appeal. There is, however, often as much value in looking to understand, and then include, products that are not relevant to you as there is in focusing on something that is different. This is a deeper understanding of E-beam curing and its potential for all UV applications, and highlights that there is no one-size-fits-all technology, but rather the most suitable technology.
22,301 monthly visits
Brand manager audience

25,700 monthly visits
Leading Flexo title
Breakout Session

Team Printing

Elsa Callini  
Business Development Manager Printing  
ebeam

Willard Raymond  
CEO  
PPSI
Guidance 2020 on track

Focus Strategy
Food & Printing

Our Approach
Demonstrator + Strategic Partner + Marketing